l4_tdgroup (TMYthWewMp-SUZDP66DFwHEyftS9LnhEZpEX)

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Let $v12\_vectsp\_1 : \iota \Rightarrow o$ be given. Let $k1\_vectsp\_1 : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $k3\_rlvect\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $v2\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $l1\_algstr\_0 : \iota \Rightarrow o$ be given. Let $k1\_algstr\_0 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v8\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v13\_algstr\_0 : \iota \Rightarrow o$ be given. Let $v3\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v4\_rlvect\_1 : \iota \Rightarrow o$ be given. Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $l2\_algstr\_0 : \iota \Rightarrow o$ be given. Let $l2\_struct\_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ (u1\_struct\_0\ k1\_vectsp\_1)) \Rightarrow ((k3\_rlvect\_1\ k1\_vectsp\_1\ X0\ X0 = k4\_struct\_0\ k1\_vectsp\_1) \Rightarrow (X0 = k4\_struct\_0\ k1\_vectsp\_1)) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((v2\_rlvect\_1\ X0) \wedge (l1\_algstr\_0\ X0)) \wedge ((m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \wedge (m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)))) \Rightarrow (k3\_rlvect\_1\ X0\ X1\ X2 = k1\_algstr\_0\ X0\ X1\ X2) \tag{2}$$

Assume the following.

$$(v8\_algstr\_0\ k1\_vectsp\_1) \wedge ((v13\_algstr\_0\ k1\_vectsp\_1) \wedge ((v2\_rlvect\_1\ k1\_vectsp\_1) \wedge ((v3\_rlvect\_1\ k1\_vectsp\_1) \wedge (v4\_rlvect\_1\ k1\_vectsp\_1)))) \tag{3}$$

Assume the following.

$$(\neg v2\_struct\_0\ k1\_vectsp\_1) \wedge (v8\_algstr\_0\ k1\_vectsp\_1) \tag{4}$$

Assume the following.

$$\forall X0.(l2\_algstr\_0\ X0) \Rightarrow ((l2\_struct\_0\ X0) \wedge (l1\_algstr\_0\ X0)) \tag{5}$$

Assume the following.

$$(v8\_algstr\_0\ k1\_vectsp\_1) \wedge (l2\_algstr\_0\ k1\_vectsp\_1) \tag{6}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0)\wedge(l2\_algstr\_0\ X0))\Rightarrow((v12\_vectsp\_1\ X0)\Leftrightarrow(\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0))\Rightarrow((k1\_algstr\_0\ X0\ X1\ X1 = k4\_struct\_0\ X0)\Rightarrow(X1 = k4\_struct\_0\ X0)))) \tag{7}$$

Theorem 1 $v12\_vectsp\_1\ k1\_vectsp\_1$.